

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Applicants:

Date: October 22, 2007

Beaman et al.

Group Art Unit: 2829

Serial No.: 09/251,988

Examiner: J. M. Hollington

Filed: February 17, 1999

Docket No.: YO999-088

For: **STRUCTURAL DESIGN AND PROCESSES TO CONTROL PROBE POSITION ACCURACY IN A WAFER TEST PROBE ASSEMBLY**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

STATUS INQUIRY

Dear Sirs,

Applicant requests a status of the referenced application. On May 31, 2007 applicant electronically submitted a response to the Office Action dated, March 31, 2007 and on June 4, 2007 applicant electronically submitted a Supplemental Response to the same Office Action.

In a review of applicants file it has been determined that both electronic acknowledgement receipts list Serial Number 09/251,988 for the responses submitted May 31 and June 4, but the Serial Number listed on the first page for each response is 10/145,661 which is a related application to 09/251,988.

Attached herewith is a copy of what was electronically submitted on May 31 and June 4 with the electronic acknowledgement receipt.

Please charge any fee necessary to enter this paper and any previous paper to deposit account 09-0468.

Respectfully submitted,

By: /Daniel P. Morris/
Dr. Daniel P. Morris, Esq.
Reg. No. 32,053
Phone No. (914) 945-3217

IBM Corporation
Intellectual Property Law Dept.
P. O. Box 218
Yorktown Heights, New York 10598

Electronic Acknowledgement Receipt

EFS ID:	1828105
Application Number:	09251988
International Application Number:	
Confirmation Number:	3930
Title of Invention:	STRUCTURAL DESIGN AND PROCESSES TO CONTROL PROBE POSITION ACCURACY IN A WAFER TEST PROBE ASSEMBLY
First Named Inventor/Applicant Name:	BRIAN SAMUEL BEAMAN
Correspondence Address:	IBM CORPORATION INTELLECTUAL PROPERTY LAW DEPT P O BOX 218 - YORKTOWN HEIGHTS NY 10598 US -
Filer:	Daniel Peter Morris./Angelique Maldonado
Filer Authorized By:	Daniel Peter Morris.
Attorney Docket Number:	Y0998-088
Receipt Date:	31-MAY-2007
Filing Date:	17-FEB-1999
Time Stamp:	17:56:38
Application Type:	Utility

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part/.zip	Pages (if appl.)
1		YOR919990088US1_Response6-1-07.pdf	149412	yes	9
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment - After Non-Final Rejection		1	1	
	Applicant Arguments/Remarks Made in an Amendment		2	9	

Warnings:

Information:

Total Files Size (in bytes):	149412
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Applicants: Date: June 1, 2007
B. S. Beaman et al. Group Art Unit: 2829
Serial No.: 10/145,661 Examiner: J. M. Hollington
Filed: May 14, 2002 Docket No.: YOR919990088US1
For: STRUCTURAL DESIGN AND PROCESSES TO CONTROL PROBE
POSITION ACCURACY IN A WAFER TEST PROBE ASSEMBLY

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO OFFICE ACTION DATED MARCH 1, 2007

siri

In response to the Office Action dated March 1, 2007, please amend the above-identified application as follows:

Remarks begin on page 2 of this paper.

REMARKS

Reconsideration is respectfully requested in view of any changes to the claims and the remarks herein. Please contact the undersigned to conduct a telephone interview in accordance with MPEP 713.01 to resolve any remaining requirements and/or issues prior to sending another Office Action. Relevant portions of MPEP 713.01 are included on the signature page of this amendment.

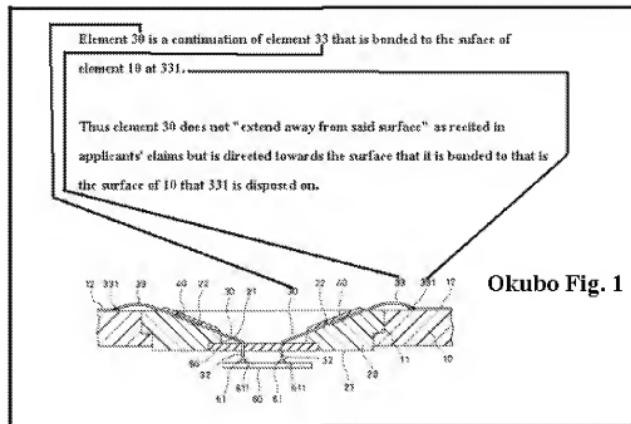
Claim Rejections - 35 USC § 102

Claims 7, 10, 41-43, 49, 51, 58-60 have been rejected under 35 U.S.C. 102(e) as being anticipated by Okubo et al (5134365). Applicants respectfully disagree and respectfully request this rejection be withdrawn.

The Examiner states:

Regarding claim 41, Okubo et al disclose a method [see also Fig. 1] comprising: providing a substrate (board 10) having a surface (top surface of 10); forming a plurality of flexible elongated electrical conductors (probes 30) extending away from said surface; each of said flexible elongated electrical conductors (30) having a first end (rear end 33) affixed to said surface [via solder 331] and a second end (probe tip 32) projecting away from said surface (top of 10); there being a plurality of said second ends (32); providing a means for maintaining said plurality of said second ends (32) in substantially fixed positions [via resin 50] with respect to each other.

The Examiner does not identify where in the teaching of Okubo elements 30 thereof is referred to as "flexible." Thus the Examiner has not made out a *prima facie* case of anticipation. Also Fig. 1 of Okubo does not show elements 30 extending away from a surface of element 10. Applicants' claim 41 recites "said elongated electrical conductors having a first end affixed to said surface" and recites "elongated electrical conductors extending away from said surface." Okubo Fig. 1 does not teach this as shown in this figure commenting on Okubo Fig 1.



For the reasons given in the Figure above applicants disagree with the Examiner's statement that:

each of said flexible elongated electrical conductors (30) having a first end (rear end 33) affixed to said surface [via solder 331] and a second end (probe tip 32) projecting away from said surface (top of 10); there being a plurality of said second ends (32); providing a means for maintaining said plurality of said second ends (32) in substantially fixed positions [via resin 50] with respect to each other.

Applicants' claim 41 recites "elongated electrical conductors having ... a second end projecting away from said surface." Okubo Fig. 1 does not show element 32 projecting away from the surface of element 20 that element 331 is disposed on.

Okubo shows expanded views in Fig. 2(a) and Fig. 2(b) of ends (32) in element 50. Element 50 does not comprise openings larger in size than the elongated electrical conductors. In fact Fig. 2(a) and 2(b) of Okubo show element 50 having openings that are the same size as the conductors 30 which result is ends 32 being in a fixed position and not in "substantially fixed positions" as recited in applicants claim 41.

Okubo *Fig. 2(a)*

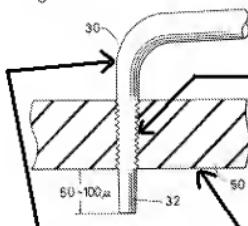
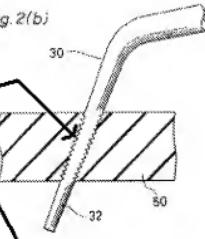
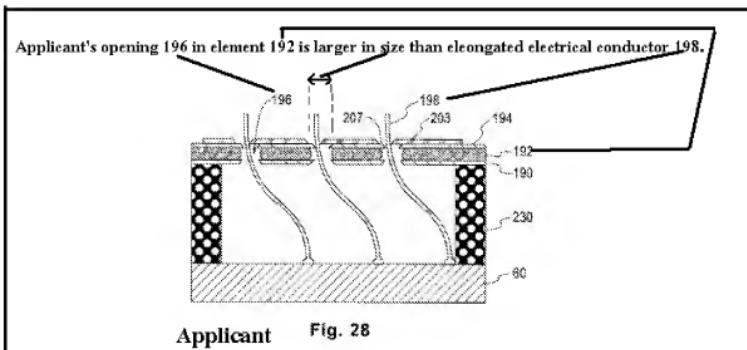


Fig. 2(b)



Okubo element 30 is embedded in element 50 wherein the opening in 50 through which element 30 projects has the same size as that of element 30.

For example applicants' Fig. 28 being shows element 192 having openings 196 that are larger in size than elongated conductor 198 which substantially holds conductor in a fixed position but not in a fixed position. In applicants Fig. 28 elongated conductors can move within the opening 196 being held in substantially fixed position defined by the opening 196 in element 192.



The Examiner further states:

Regarding claim 49, Okubo et al disclose means for maintaining comprising a sheet of material (support 20) having a plurality of opening (openings 11 and 21).

Element 20 of Okubo has one opening 11. The Examiner has incorrectly stated that 11 is an opening in element 20. Element 11 of Okubo Fig. 1 is an opening in element 10. Thus element 20 of Okubo Fig. 1 has only one opening and not a "openings" as recited in applicants' claim 49. Moreover, when element 20 is inserted into opening 11 of element 10 of Okubo Fig. 1 element 11 is no longer an opening.

The Examiner further states:

Regarding claim 7, Okubo et al disclose said sheet of material (20) is spaced apart from said surface by a flexible support

(opening 11).

Applicants' claim 7 recites "said sheet of material is spaced apart from said surface by a flexible support." The surface is the surface to which the first ends of the elongated electrical conductors are affixed to. Okubo Fig. 1 does not teach this. Fig. 1 from Okubo is shown above. Element 20 is not spaced apart from the surface of element 10 that element 331 is disposed on which is the location that element 33 is attached to. In fact element 20 of Fig. 1 is in the same plane as the surface that element 331 is disposed on and thus element 20 cannot be spaced apart from the surface that element 331 is disposed on as the Examiner contends. Moreover, the Examiner does not identify what in Okubo is a "flexible support." The Examiner does not explain how "opening (11)" of Okubo is a "flexible support" as recited in applicants' claim 7 as the Examiner states in the passage quoted above. Thus the Examiner has not made out a *prima facie* case for anticipation of claim 7.

The Examiner further states:

Regarding claim 10, Okubo et al disclose said sheet (20) and said flexible support (11) forms a space containing said plurality of elongated electrical conductors (30).

The Examiner does not identify in the quoted passage what the "space" is in Okubo. Applicants' claim 10 recites "said sheet and said flexible support forms said space." The Examiner has not identified what corresponds to this in Okubo. Thus the Examiner has not made out a case of *prima facie* anticipation. Okubo teaches at Col. 3. , lines 65-66, that "opening 11 having a stepped ring wall is formed at a central portion of the board 10." Thus Okubo 11 is not a flexible support as stated by the Examiner.

The Examiner further states:

Regarding claim 42, Okubo et al disclose said sheet (20) is formed and material selected from the group consisting of Invar, Cu/Invar/Cu, molybdenum, and polyimides.

The Examiner does not identify where Okubo teaches Invar, Cu/Invar/Cu, molybdenum, and polyimides. Thus the Examiner has not made out a case of *prima facie* anticipation of claim 42.

The Examiner further states:

Regarding claim 43, Okubo et al disclose said sheet (20) is formed from a material selected from the group consisting of a metal, a polymer, a semiconductor and dielectric.

The Examiner does not identify where Okubo teaches that element 20 is formed from a material selected from the group consisting of a metal, a polymer, a semiconductor and dielectric. Thus the Examiner has not made out a case of *prima facie* anticipation of claim 43.

The Examiner further states:

Regarding claim 51, Okubo et al disclose said means for maintaining (20) comprises openings comprising a large region (21) and a small region (within resin 50), said compliant elongated electrical conductors (30) are first inserted through said large region (21) and then moved to said small region (within resin 50).

The Examiner does not identify here what in Okubo corresponds to the term "openings" recited in applicants' claim 51. The Examiner does not identify here what in Okubo corresponds to the term "small region" recited in applicants' claim 51. The Examiner does not identify where there is a teaching in Okubo for "first inserted through said large region (21) and then moved to said small region (within resin 50)." Thus the Examiner has not made out a case of *prima facie* anticipation of applicants' claim 51.

The Examiner further states:

Regarding claim 58, Okubo et al disclose said means for maintaining (20) is a sheet of material comprising a plurality of openings (21) through which said seconds ends (32) project.

Claim 58 recites "plurality of openings." The Examiner identifies the single element 21 of element 20 of Okubo as the element of Okubo corresponding to a "plurality of openings." A single opening does not anticipate a "plurality of openings." Thus the Examiner has not made out a case of *prima facie* anticipation of applicants' claim 58.

The Examiner further states:

Regarding claim 59, Okubo et al disclose said means for maintaining (20) comprises at least one sheet of material comprising a plurality of openings (21) through which said second ends (32) project.

Claim 59 recites "plurality of openings." The Examiner identifies the single element 21 of element 20 of Okubo as the element of Okubo corresponding to a "plurality of openings." A single opening does not anticipate a "plurality of openings." Thus the Examiner has not made out a case of *prima facie* anticipation of applicants' claim 59.

The Examiner further states:

Regarding claim 60, Okubo et al disclose of said at least one sheet (20) is a sheet of electrically conductive material which has a top surface and a bottom surface and said openings (21) have a sidewall, a dielectric material coats said top surface and said bottom surface and said sidewall.

The Examiner has not identified where Okubo teaches that Okubo element 20 is a sheet of electrically conductive material, where Okubo teaches that a top surface and a bottom surface of element 20 of Okubo and the side wall of Okubo element 21 are coated with a dielectric material. Thus the Examiner has not made out a case of *prima facie* anticipation of applicants' claim 60.

In view of the remarks herein the Examiner is respectfully requested to withdraw the rejection of claims 54-68 under 35 USC 102(e) as anticipated by Okubo.

In view of the changes to the claims and the remarks herein, the Examiner is respectfully requested to reconsider the above-identified application. If the Examiner wishes to discuss the application further, or if additional information would be required, the undersigned will cooperate fully to assist in the prosecution of this application.

Please charge any fee necessary to enter this paper and any previous paper to deposit account 09-0468.

If the above-identified Examiner's Action is a final Action, and if the above-identified application will be abandoned without further action by applicants, applicants file a Notice of Appeal to the Board of Appeals and Interferences appealing the final rejection of the claims in the above-identified Examiner's Action. Please charge deposit account 09-0468 any fee necessary to enter such Notice of Appeal.

In the event that this amendment does not result in allowance of all such claims, the undersigned attorney respectfully requests a telephone interview at the Examiner's earliest convenience.

MPEP 713.01 states in part as follows:

Where the response to a first complete action includes a request for an interview or a telephone consultation to be initiated by the examiner, ... the examiner, as soon as he or she has considered the effect of the response, should grant such request if it appears that the interview or consultation would result in expediting the case to a final action.

Respectfully submitted,

By: /Daniel P. Morris/

Dr. Daniel P. Morris, Esq.
Reg. No. 32,053
Phone No. (914) 945-3217

IBM Corporation
Intellectual Property Law Dept.
P. O. Box 218
Yorktown Heights, New York 10598

Electronic Acknowledgement Receipt

EFS ID:	1835705
Application Number:	09251988
International Application Number:	
Confirmation Number:	3930
Title of Invention:	STRUCTURAL DESIGN AND PROCESSES TO CONTROL PROBE POSITION ACCURACY IN A WAFER TEST PROBE ASSEMBLY
First Named Inventor/Applicant Name:	BRIAN SAMUEL BEAMAN
Correspondence Address:	IBM CORPORATION INTELLECTUAL PROPERTY LAW DEPT P O BOX 218 - YORKTOWN HEIGHTS NY 10598 US -
Filer:	Daniel Peter Morris./Angelique Maldonado
Filer Authorized By:	Daniel Peter Morris.
Attorney Docket Number:	Y0998-088
Receipt Date:	04-JUN-2007
Filing Date:	17-FEB-1999
Time Stamp:	15:21:56
Application Type:	Utility

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part/.zip	Pages (if appl.)
1		YOR919990088US1_SupplementalResponse.pdf	66011	yes	6
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment - After Non-Final Rejection		1	1	
	Applicant Arguments/Remarks Made in an Amendment		2	6	

Warnings:

Information:

Total Files Size (in bytes):

66011

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National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Applicants: Date: June 4, 2007
B. S. Beaman et al. Group Art Unit: 2829
Serial No.: 10/145,661 Examiner: J. M. Hollington
Filed: May 14, 2002 Docket No.: YOR919990088US1
For: STRUCTURAL DESIGN AND PROCESSES TO CONTROL PROBE
POSITION ACCURACY IN A WAFER TEST PROBE ASSEMBLY

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL RESPONSE TO OFFICE ACTION DATED MARCH 1, 2007

Siri:

In response to the Office Action dated March 1, 2007, please amend the above-identified application as follows:

Amendments to the Claims begin on page 2 of this paper.

Remarks begin on page 5 of this paper.

IN THE CLAIMS

CLAIMS 1 – 6 (Canceled)

CLAIM 7 (Previously Presented) A method according to claim 49 wherein said sheet is spaced apart from said surface by a flexible support.

CLAIMS 8 – 9 (Canceled)

CLAIM 10 (Previously Presented) A method according to claim 7 wherein said sheet and said flexible support forms a space containing said plurality of elongated electrical conductors.

CLAIMS 11 – 40 (Canceled)

CLAIM 41 (Original) A method comprising:

providing a substrate having a surface;

forming a plurality of elongated electrical conductors extending away from said surface; each of said elongated electrical conductors having a first end affixed to said surface and a second end projecting away from said surface;

there being a plurality of said second ends;

providing a means for maintaining said plurality of said second ends in substantially fixed positions with respect to each other.

CLAIM 42 (Previously Presented) A method according to claim 41 wherein said means for maintaining is a sheet formed from a material selected from the group consisting of Invar, Cu/Invar/Cu, molybdenum and polyimides.

CLAIM 43 (Previously Presented) A method according to claim 41 wherein said means for maintaining is a sheet formed from a material selected from the group consisting of a metal, a polymer, a semiconductor and dielectric.

CLAIMS 44 – 48 (Canceled)

CLAIM 49 (Previously Presented) A method according to claim 41 wherein said means for maintaining comprises a sheet of material comprising openings comprising a large region and a small region.

CLAIM 50 (Canceled)

CLAIM 51 (Previously Presented) A method according to claim 41 wherein said means for maintaining comprises openings comprising a large region and a small region, said compliant elongated electrical conductors are first inserted through said large region and then moved to said small region.

CLAIMS 52 – 57 (Canceled)

CLAIM 58 (Previously Presented) A method according to claim 41 wherein said means for maintaining is a sheet of material comprising a plurality of openings through which said second ends project.

CLAIM 59 (Previously Presented) A method according to claim 41 wherein said means for maintaining comprises at least one sheet of material comprising a plurality of openings through which said second ends project.

CLAIM 60 (Previously Presented) A structure according to claim 59 wherein of said at least one sheet is a sheet of electrically conductive material which has a top surface and a

bottom surface and said openings have a sidewall, a dielectric material coats said top surface and said bottom surface and said sidewall.

CLAIM 61 – 63 (Canceled)

CLAIM 64 (New) The structure according to claim 51 wherein each of said elongated electrical conductors projects through one of said openings in said sheet of material.

CLAIM 65 (New) The structure according to claim 58 wherein each of said elongated electrical conductors projects through one of said plurality of openings in said sheet of material.

CLAIM 66 (New) The structure according to claim 59 wherein each of said elongated electrical conductors projects through one of said plurality of openings in said sheet of material.

CLAIM 67 (New) The structure according to claim 41 wherein said means for maintaining comprises openings which are larger in size than said elongated electrical conductor and wherein each of said elongated electrical conductors projects through one of said openings in said sheet of material.

CLAIM 68 (New) The structure according to claim 58 wherein each of said plurality of openings is larger in size than said elongated electrical conductor.

REMARKS

Reconsideration is respectfully requested in view of any changes to the claims and the remarks herein. Please contact the undersigned to conduct a telephone interview in accordance with MPEP 713.01 to resolve any remaining requirements and/or issues prior to sending another Office Action. Relevant portions of MPEP 713.01 are included on the signature page of this amendment. This response is in supplement to applicants' response submitted on May 31, 2007.

Claims 64-68 are added herein. Support for these added claims is found throughout applicants' specification in particular in applicants' Fig. 28 and the description corresponding thereto and as explained in applicants' response of May 31, 2007.

In view of the remarks herein the Examiner is respectfully requested to withdraw the rejection of claims 54-68 under 35 USC 102(e) as anticipated by Okubo.

In view of the changes to the claims and the remarks herein, the Examiner is respectfully requested to reconsider the above-identified application. If the Examiner wishes to discuss the application further, or if additional information would be required, the undersigned will cooperate fully to assist in the prosecution of this application.

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Respectfully submitted,

By: /Daniel P. Morris/
Dr. Daniel P. Morris, Esq.
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